

Durethan® AKV 35 H2.0 901510

Polyamide 66

LANXESS GmbH

Message:

PA 66, 35 % glass fibers, injection molding, heat-aging stabilized

General Information				
UL YellowCard		E245249-473557		
Filler / Reinforcement		Glass fiber reinforced material, 35% filler by weight		
Additive		heat stabilizer		
Features		Thermal Stability		
Agency Ratings		EC 1907/2006 (REACH)		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.41	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Vertical flow direction: 300°C, 2.00mm ¹	0.91	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.070	--	%	ISO 2577
Flow direction: 300°C, 2.00mm ³	0.37	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.050	--	%	ISO 2577
Water Absorption				ISO 62
Saturated, 23°C	5.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.7	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	220	140	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				
23°C	10300	6600	MPa	ASTM D638
23°C	11200	7500	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	200	125	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.1	6.4	%	ISO 527-2/5
Tensile Creep Modulus				ISO 899-1
1 hr	--	7000	MPa	ISO 899-1
1000 hr	--	5800	MPa	ISO 899-1
Flexural Modulus				
23°C	9300	6400	MPa	ASTM D790

23°C ⁵	10500	6500	MPa	ISO 178/A
Flexural Strength				
5.0% strain, 23°C	280	160	MPa	ASTM D790
23°C	300	200	MPa	ASTM D790
3.5% strain, 23°C	280	165	MPa	ISO 178/A
23°C ⁶	300	200	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	4.1	6.2	%	ISO 178/A
Burning Behavior ⁸ (> 1.00 mm)	29	--		ISO 3795
ISO Shortname	PA 66, GHR, 14-110, GF35	--		ISO 1874
Residual Moisture Content	0.030 - 0.12		%	Karl Fisher
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	10	10	kJ/m ²	ISO 179/1eA
23°C	12	17	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	70	75	kJ/m ²	ISO 179/1eU
23°C	85	90	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	10	10	kJ/m ²	ISO 180/1A
23°C	12	15	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	65	--	kJ/m ²	ISO 180/1U
23°C	75	--	kJ/m ²	ISO 180/1U
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	2.60	--	J	ISO 6603-2
23°C	3.20	5.90	J	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	830	--	N	ISO 6603-2
23°C	900	1260	N	ISO 6603-2
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	250	--	°C	ISO 75-2/B
1.8 MPa, not annealed	250	--	°C	ISO 75-2/A
Vicat Softening Temperature				
--	230	--	°C	ISO 306/B50
--	250	--	°C	ISO 306/B120

Ball Pressure Test (254°C)	Pass	--		IEC 60695-10-2
Melting Temperature ⁹	263	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	3.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	9.0E-5	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+15	1.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	35	30	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.00	10.0		IEC 60250
23°C, 1 MHz	4.00	4.00		IEC 60250
Dissipation Factor				IEC 60250
23°C, 100 Hz	0.011	0.21		IEC 60250
23°C, 1 MHz	0.015	0.065		IEC 60250
Comparative Tracking Index (Solution A)	425	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.60 mm	HB	--		UL 94
3.20 mm	HB	--		UL 94
Glow Wire Flammability Index (2.00 mm)	600	--	°C	IEC 60695-2-12
Oxygen Index ¹⁰	25	--	%	ISO 4589-2
Injection	Dry	Unit	Test Method	
Drying Temperature - Dry Air Dryer	80.0		°C	
Drying Time - Dry Air Dryer	2.0 - 6.0		hr	
Processing (Melt) Temp	280 - 300		°C	
Mold Temperature	80.0 - 120		°C	
NOTE				
1.	60x60x2mm, 80°C MT, 600 bar			
2.	60x60x2mm			
3.	60x60x2mm, 80°C MT, 600 bar			
4.	60x60x2mm			
5.	2.0 mm/min			
6.	2.0 mm/min			
7.	2 mm/min			
8.	US-FMVSS302			
9.	10°C/min			

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